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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,009	01/11/2001	J. Wallace Parce	01-050110US	2750

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QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.
P O BOX 458
ALAMEDA, CA 94501

EXAMINER

CHOI, LING SIU

ART UNIT PAPER NUMBER

1713

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/760,009	Applicant(s) PARCE ET AL. S.C.	
	Examiner Ling-Siu Choi	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 29 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/11/2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>05/07 & 21/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the Response to Restriction Requirement filed July 29, 2004. Claims 1-70 of Group I have been elected without traverse.

Claim Objections

2. Claims 1-70 are objected to because of the following informalities: claim 1, lines 13-14, the recitation "thereby monitoring the flow rate of the fluidic material" is suggested to be deleted because it is a redundancy of recitation "provide an indication of the flow rate of the fluidic material" on lines 10-11 of the same claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. **The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:**

**A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.**

4. Claims 1-70 are rejected under 35 U.S.C. 102(b) as being anticipated by Kopf-Sill (US 6,001,231).

The present invention relates to a method to monitor a flow rate of a fluidic material in a microfluidic device, the method comprising

1	flowing a first marker moiety through the at least one microscale channel
2	flowing the fluidic material through the at least one microscale channel
3	flowing a second marker moiety through the at least one microscale channel
4	detecting the first markert moiety, resulting in detection of a first signal having a first area and a first retention time
5	detecting the second markert moiety, resulting in detection of a second signal having a second area and a second retention time
6	deconvoluting the first signal and the second signal to provide an indication of flow rate of the fluidic material, wherein the deconvoluting comprises identifying differences between two or more of the first signal, the second signal, a first selected standard, or a second selected standard

(summary of claim 1)

Kopf-Sill disclose a method to monitor flow rate in microfluidic systems, the method comprising (a) flowing a first fluid along the first channel by applying a voltage gradient across a length of the first channel; (b) injecting a signaling compound into the first channel; (c) determining the flow rate of the first fluid in the first channel from the rate at which the signaling compound flows from a first point to a second point in the first channel; (d) flowing a second fluid different from the first fluid along the second channel; (e) determining the flow rate of the second fluid in the second channel from the rate at which the signaling compound flows from a first point to a second point in the second channel, wherein channel 1 and channel 2 intersect each other, which can be used to control the flow rate in the the electroosmotically driven microfluidic system

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(abstract; claim 1). Kopf-Sill further disclose that optically detectable signals is used in both the overall operation and the determination of flow rate, wherein those optical signals are distinguishable fluorescent compounds which emit light at two different wavelengths (col. 13, lines 23-58). Kopf-Sill furthermore disclose a program for a computer to monitor and control flow rate within the microfluidic device (col. 16, lines 34-36). Thus the present claims are anticipated by the disclosure of Kopf-Sill.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.


LING-SUI CHOI
PRIMARY EXAMINER

Ling -Siu Choi, Ph.D.

September 4, 1999